**Homework 82H** Name:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**Translate Figure & Use Vectors** Period:\_\_\_\_Date:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**Failure to show all work and write in complete sentences will result in LaSalle!**

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| 1) Use the translation (x, *y) →* (x - 5, *y +* 8).   1. What is the image of *B*(4, 2)? 2. What is the image of *D( –*1, 5)? 3. What is the *preimage* of *F'(–3, –*4)? 4. What is the *preimage* *of H'(7,* –5)? 5. What is the image of *J*(0, 2)? 6. What is the *preimage* of *K'(–4, 6)?* | | 2) Write a rule for the translation.   1. 1 unit to the left and 1 unit up 2. 3 units down 3. 7 units to the left and 4 units down 4. 10 units right and 8 units up |
| 3) Δ*A'B'C’* is the image of Δ*ABC* after a translation. Write a rule for the translation.  a.    b. | | 4) Name the vector and write its component form.  a.    b.    c. |
| 5) The vertices of Δ *ABC* are *A*(1, 2), *B*(2, 6), and *C*(3, 1). Translate Δ *ABC* using the given vector. Graph Δ *ABC and* its image. <8,2> | 6) Δ*ABC* with vertices *A(–2,* 4), *B(6, 2),* and C(3, –2) is translated to Δ*A'B’C'.* Determine the translation using a vector in component form, and determine the coordinates of the remaining vertices.   1. *A'*(–5,5) 2. *B'*(*2,* –5) 3. *C'*(–4,–5) 4. *B'*(8*,* 6) | |